

REMARKS/ARGUMENTS

This Amendment and Response to Office Action is submitted concurrently with a set of **Formal Drawings**. In the Office Action dated March 31, 2003 the Examiner: (1) objected to the Drawings, (2) objected to the Specification, (3) and rejected claims 1-22 under 35 U.S.C. § 103(a).

Status of the Claims

Claims 1-22 are in original form.

Claims 23-31 are new.

Objection to the Drawings

The Examiner objected to the drawings, stating that Figures 1-4 should be designated “Prior Art” because they depict only that which is old. In response, Applicant submits concurrently herewith a set of **Formal Drawings** that have been corrected to comply with the Examiner’s request to designate Figures 1-4 as “Prior Art.”

Objection to the Specification

The Examiner objected to the Specification, noting that the first sentence of paragraph 37 on page 15 should be updated. In response, Applicant has amended the Specification in accordance with the Examiner’s request.

Claim Rejections Under 35 USC § 103(a)

Claims 1-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Baldwin et al., U.S. Patent No. 6,042,152 (hereinafter *Baldwin*) in view of Applicant’s Admitted Prior Art (pages 2-5). The Examiner takes the position that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the liner assembly of *Baldwin* to employ a metal liner assembly in view of Applicant’s disclosure regarding metal liners offering longer life and resistance over elastomer liners.

Applicant traverses the Examiner’s argument that such a substitution would be obvious. Nevertheless, even if it were obvious to modify *Baldwin* to employ a metal liner assembly, Applicant submits that no *prima facie* case of obviousness has been established with respect to claims 1-16 at least because *Baldwin* fails to teach or suggest a dual sealing system or a method that employs a dual sealing system. Instead, referring first to Figure 5, *Baldwin* discloses a composite tube 12 having an

elastomeric liner 20 and a single Y-shaped, thermoplastic seal 24 disposed between an end fitting 14 and the composite tube 12. The Y-shaped seal 24 defines a pair of diverging arms 24a, 24b and a leg 24c. The seal 24 is compression molded or injection molded onto tapered lands 30, 32 of the fitting 14 to create an adhesive bond thereto. During manufacture, the uncured elastomeric liner 20 is applied to extend onto the exterior surface of the seal 24. The composite tube 12 is then created over the liner 20 by filament winding and/or braiding, and when the composite is cured, the liner 20 is bonded to the seal 24 to create a pressure-tight barrier. Figure 6 depicts another embodiment of the single Y-shaped seal 24A having ribs that extend into grooves 34, 36 in the fitting 14, which is required if the seal material cannot be reliably bonded to the fitting 14. In this embodiment, the Y-shaped seal 24A is fusion welded at 38 to the liner 20. Thus, *Baldwin* discloses only a single-sealing system comprising one Y-shaped seal 24 or 24A. If this Y-shaped seal 24, 24A fails, there is no other seal to prevent leakage of internal fluid to the outside of the composite riser. Accordingly, at least because *Baldwin* fails to teach or suggest a dual sealing system, Applicant submits that independent apparatus claim 1 and independent method claim 8 are both in condition for allowance.

In addition, Applicant submits that claims 2-7 and 9-16 are in condition for allowance at least because each of these claims depend from allowable claim 1 or claim 8. With respect to rejected claims 2-7 and 9-16, the Examiner takes the position that *Baldwin* discloses a mechanical seal and an elastomeric seal. In particular, the Examiner states that the mechanical seal is formed between mating grooves in a transition ring 24 and the MCI, referring to the ribs of seal 24A extending into grooves 34, 36 in the fitting 14. The Examiner also states that the elastomeric seal comprises an elastomeric tip (arm 24b) proximate the interface between the MCI and transition ring, and that the elastomeric seal is formed when the elastomeric tip 24b and elastomer shear ply (liner 20) are bonded together.

With respect to claim 2, Applicant traverses the Examiner's characterization that *Baldwin* discloses a mechanical seal and an elastomeric seal. As stated above, Applicant submits that *Baldwin* discloses only one seal 24, 24A. Further, Applicant traverses the Examiner's characterization of the Y-shaped seal 24 as the claimed "transition ring." A Y-shaped elastomeric component is not equivalent to a metal "transition ring" in a liner assembly forming part of a mechanical seal. Further, Applicant traverses the Examiner's characterization of the elastomeric liner 20 as the claimed "elastomeric shear ply." In particular, even if the *Baldwin* liner 20 is an elastomeric shear ply, it is not equivalent to an elastomeric shear ply "provided on the outside of the liner assembly" according

to claim 2. Instead, the elastomeric liner 20 is the liner assembly. Thus, it is impossible for the liner 20 to be equivalent to **both** the claimed liner assembly and the claimed elastomer shear ply, which is provided over the liner assembly. At least for these additional reasons, Applicant submits that claim 2 is in condition for allowance.

With respect to claims 3 and 7, *Baldwin* fails to teach or suggest a dual sealing system according to claim 2 or according to claim 4, respectively, wherein the elastomeric seal prevents leakage in the event that the integrity of the mechanical seal or the integrity of the metal liner is compromised. In particular, as stated above, Applicant submits that *Baldwin* teaches only a single seal 24, 24A, and therefore fails to teach or suggest another seal to prevent leakage should the Y-shaped seal 24, 24A or the liner 20 fail, even assuming it would be obvious to substitute the elastomeric liner for a metal liner as asserted by the Examiner. At least for these additional reasons, Applicant submits that claim 3 and claim 7 are in condition for allowance.

With respect to claim 4, *Baldwin* fails to teach or suggest a dual sealing system according to claim 2 wherein the elastomeric seal comprises an elastomeric tip proximate an interface between the MCI and the transition ring. In particular, Applicant traverses the Examiner's characterization of the arm 24b of seal 24 as the claimed "elastomeric tip" since the arm 24b only covers the top tapered land 32 of the fitting 14 rather than the whole end of the fitting 14. Further, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to the claimed transition ring. At least for these additional reasons, Applicant submits that claim 4 is in condition for allowance.

With respect to claims 5, *Baldwin* fails to teach or suggest a dual sealing system according to claim 4 wherein the elastomeric tip and the elastomeric shear ply are bonded together to form the elastomeric seal. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to the claimed elastomeric shear ply provided on the outside of the liner assembly. At least for these additional reasons, Applicant submits that claim 5 is in condition for allowance.

With respect to claim 6, *Baldwin* fails to teach or suggest a dual sealing system according to claim 4 wherein the elastomeric tip and the elastomeric shear ply are provided in an uncured state and are cured to form the elastomeric seal. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to the claimed elastomeric shear ply provided on the outside of the liner assembly. At least for these additional reasons, Applicant submits that claim 6 is in condition for allowance.

With respect to claim 9, *Baldwin* fails to teach or suggest a method according to claim 8 wherein one of the dual seals comprises an elastomeric seal between a MCI and an elastomeric shear ply provided on the outside of the liner assembly. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to the claimed elastomeric shear ply provided on the outside of the liner assembly. At least for these additional reasons, Applicant submits that claim 9 is in condition for allowance.

With respect to claim 10 and claim 14, *Baldwin* fails to teach or suggest a method according to claim 9 or according to claim 12, respectively, wherein the other of the dual seals comprises a mechanical seal between the MCI and a transition ring of the liner assembly. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest dual seals and further fails to teach or suggest an equivalent to the claimed transition ring. At least for these additional reasons, Applicant submits that claim 10 and claim 14 are in condition for allowance.

With respect to claim 11, *Baldwin* fails to teach or suggest a method according to claim 10 wherein the elastomeric seal prevents leakage in the event that the integrity of the mechanical seal or the integrity of the liner is compromised. In particular, as stated above, Applicant submits that *Baldwin* teaches only a single seal 24, 24A, and does not teach or suggest another seal to prevent leakage should the Y-shaped seal 24, 24A or the liner 20 fail. At least for these additional reasons, Applicant submits that claim 11 is in condition for allowance.

With respect to claim 12, *Baldwin* fails to teach or suggest a method according to claim 9 wherein the elastomeric seal comprises an elastomeric tip proximate an interface between the MCI and the transition ring. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to the claimed transition ring. At least for these additional reasons, Applicant submits that claim 12 is in condition for allowance.

With respect to claim 15, *Baldwin* fails to teach or suggest a method according to claim 14 wherein in the event of leakage of fluid around a mechanical seal, said leaked fluid forces said elastomeric tip against the MCI along said interface with the transition ring to prevent fluid from leaking to the outside of the composite riser. In particular, as stated above, Applicant submits that *Baldwin* teaches only a single seal 24, 24A, and does not teach or suggest another seal to prevent leakage should the Y-shaped seal 24, 24A fail. At least for these additional reasons, Applicant submits that claim 15 is in condition for allowance.

Referring now to claims 17-22, Applicant submits that no *prima facie* case of obviousness has been established with respect to these claims at least because *Baldwin* fails to teach or suggest a MCI having a liner assembly comprising an elastomeric tip for forming an elastomeric seal with an elastomeric shear ply provided on the outside of the liner assembly to prevent leakage of internal fluid to the outside of the composite riser. As stated above, Applicant traverses the Examiner's characterization of the liner 20 as equivalent to the claimed "elastomeric shear ply." In particular, claim 17 recites an elastomeric shear ply "provided on the outside of the liner assembly." Even if the *Baldwin* liner 20 is an elastomeric shear ply, it is not provided on the outside of the liner assembly according to claim 17 because liner 20 **is** the liner assembly. Thus, it is impossible for the liner 20 to be equivalent to **both** the claimed liner assembly and the claimed elastomer shear ply. At least for this reason, Applicant submits that claim 17 is in condition for allowance. Applicant further submits that claims 18-22 are in condition for allowance at least because they depend from claim 17.

In addition, with respect to claim 18 and claim 20, *Baldwin* fails to teach or suggest a MCI according to claim 17 or according to claim 19, respectively, wherein the elastomeric tip and the elastomeric shear ply are provided in an uncured state and are cured to form the elastomeric seal. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to the claimed elastomeric shear ply. At least for these additional reasons, Applicant submits that claim 18 and claim 20 are in condition for allowance.

With respect to claim 19, *Baldwin* fails to teach or suggest a MCI according to claim 17 wherein the elastomeric tip is provided proximate an interface between the MCI and a transition ring of the liner assembly. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to the claimed transition ring. At least for these additional reasons, Applicant submits that claim 19 is in condition for allowance.

With respect to claim 21, *Baldwin* fails to teach or suggest a MCI according to claim 17 further comprising a mechanical seal surface on the inner surface of the MCI proximate said elastomeric tip for forming a mechanical seal with a transition ring of the liner assembly. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to both a mechanical seal and an elastomeric seal, and *Baldwin* further fails to teach or suggest an equivalent to the claimed transition ring. At least for these additional reasons, Applicant submits that claim 21 is in condition for allowance.

With respect to claim 22, *Baldwin* fails to teach or suggest a MCI according to claim 21 wherein the mechanical seal surface comprises inner grooves which conform to outer grooves of the transition ring. In particular, as stated above, Applicant submits that *Baldwin* fails to teach or suggest an equivalent to the claimed transition ring. At least for these additional reasons, Applicant submits that claim 22 is in condition for allowance.

New Claims

Applicant has added new claims 23-31 to further claim the invention. Applicant submits that these new claims are in condition for allowance at least because each claim depends from allowable claim 1, claim 8, or claim 17. Further, Applicant submits that each of the new claims 23-31 are also allowable because *Baldwin* fails to teach or suggest an equivalent to the claimed transition ring.

CONCLUSION

Applicant may have, at times, referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art, which have yet to be raised, but which may be raised in the future.

Consideration of the foregoing amendments and remarks, reconsideration of the application, and withdrawal of the rejections and objections is respectfully requested by Applicant. No new matter is introduced by way of the amendment. It is believed that each ground of rejection raised in the Office Action dated March 31, 2003 has been fully addressed. If any fee is due as a result of the filing of this paper please appropriately charge such fee to Deposit Account Number 03-2769 of Conley Rose, P.C., Houston, Texas. If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore.

If a telephone conference would facilitate the resolution of any issue or expedite the prosecution of the application, the Examiner is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,
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